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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,365	12/20/2001	Takashi Inayama	Q67168	3562

7590 04/10/2003

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EXAMINER

WALSH, BRIAN D

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,365

Applicant(s)

INAYAMA, TAKASHI

Examiner

Brian Walsh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

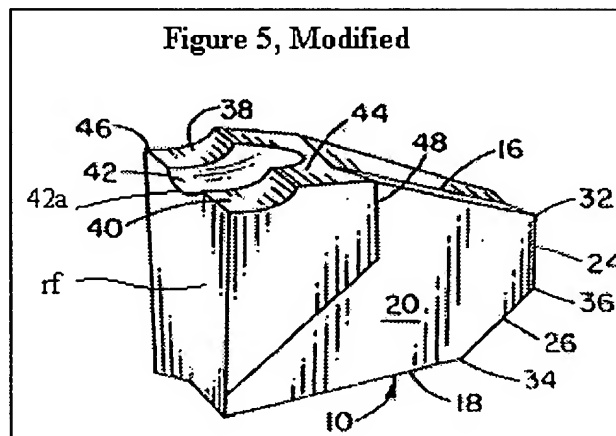
1. Claims 1 – 5, are rejected under 35 U.S.C. 102(b) as being anticipated by Simpson.

Regarding claim 1, Simpson discloses a cutting insert (20) comprising an end cutting edge (46) at an end of a rake face (rf) and a depression (42) formed in the rake face so as to provide the cutting edge with a concave edge portion (42a). Please refer to modified figure 5 by the Examiner.

Regarding claim 2, it is clear from figure 5 that the depression has a curved peripheral surface.

Regarding claim 3, again in figure 5, it is clear that the peripheral surface of the depression is *at least* a portion of a sphere (Emphasis by Examiner).

Regarding claim 4, still in figure 5, it is clear that the curved peripheral surface is *at least* a portion of a spheroid, being not perfectly round for at least that portion.



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Regarding claim 5, the cutting edge (46) of Simpson comprises the concave edge portion which is clearly centrally located on the cutting edge, as shown in figure 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson.

Regarding claims 6 – 10, Simpson discloses the claimed invention except for specifying the relationships between the concave edge portion and depression depth (claims 6, 7 and 8), cutting edge width (claim 8) and concave edge portion width (claim 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize these ranges and relationships, since Simpson discloses a cutting insert identical in structure to the instant invention and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

3. Claims 11 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson in view of Jones et al.

Regarding claims 11 – 20, Simpson discloses all of the elements as set forth in the above rejection, however, Simpson fails to disclose the cutting insert is indexable.

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It is extremely well known in the art to provide indexability as well as reversibility to cutting inserts to provide multiple cutting edges on a single insert and therefore increase the efficiency of each insert manufactured. While Simpson fails to disclose this limitation, Jones et al. discloses a cutting insert very similar to both Simpson and the instant invention wherein the insert is reversible.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the insert of Simpson to include the indexability and reversibility characteristics as taught by Jones et al. since Jones et al. discloses that throw away inserts are usually indexable so that an insert can be provided with at least two cutting edges (Col. 1, lines 9 – 17).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inayama, Huston, Dürshchinger, Wertheim, Enderle and Kumar et al. all disclose cutting inserts similar the instant invention.

Faxing of Responses to Office Actions

5. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner

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and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walsh whose telephone number is (703) 605-0638. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



BDW
April 3, 2003



A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700